

Appl. No. 10/529,778
Amendment and/or Response
to Office action of 6 August 2008

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REMARKS / DISCUSSION OF ISSUES

The Office action objects to the Declaration for an apparent error in the mailing address of one of the inventors. The applicants thank the Examiner for this attention to detail and for bringing this error to the applicants' attention. A corrected Application Data Sheet that provides the proper addresses for each inventor will be submitted under separate cover.

Claims 1-21 are pending in the application. The applicants thank the Examiner for determining that claims 4, 12, and 18 constitute allowable subject matter.

The Office action provisionally rejects claims on the grounds of nonstatutory obviousness-type double patenting over claims 1-5, 8-9, and 11-14 of copending U.S. patent application 10/529,353, hereinafter "Rosner", and Chapter 7 of "TCP/IP Illustrated, vol 1, The Protocols" by Stevens, hereinafter "Ping Program". The applicants respectfully traverse this rejection. In view of the fact that this is a provisional rejection based on claims in Rosner that are not yet part of an issued patent, the applicants respectfully decline to address the matter at this time, and respectfully request that this rejection be held in abeyance until such time as the claims in this application are determined to be allowable and/or the copending patent is issued.

The Office action rejects claims 1-3, 5-11, 13-17, and 19-21 under 35 U.S.C. 103(a) over the Ping Program, Wang (USP 6,446,028), Fletcher (USP 6,636,477), and Needham ("Using Encryption for Authentication in Large Networks of Computers"). The applicants respectfully traverse this rejection.

The applicants respectfully maintain that one of skill in the art would have no apparent reason to combine these prior art teachings in the manner claimed by the applicants, as discussed further below.

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However, even assuming in argument that these prior art teachings were to be combined, the applicants respectfully note that the combination of the Ping Program, Wang, Fletcher, and Needham does not disclose each of the elements of the applicants' claims. The combination fails to disclose communicating a response from a target node that includes a measure of processing time required to generate the response, as specifically claimed in each of the applicants' independent claims 1, 9, and 15.

The Office action asserts that Fletcher teaches that a response from a target node includes a measure of processing time required to generate the response at FIG. 11, blocks 1110-1130. The applicants respectfully disagree with this assertion.

Fletcher teaches the conventional technique of time-stamping each message as it is transmitted and received. In Fletcher's FIG. 11, the processing of the request data packet is illustrated at the left column of steps 1110, 1115, and 1116, and the processing of the response data packet is illustrated at the right column of steps 1111, 1117, and 1118.

In this example, Fletcher's "Server Computer" corresponds to the "target node" that responds to a request query. As taught by Fletcher, Fletcher's server computer time stamps the request data packet when it is received, at time T2, and time stamps the response data packet when it is transmitted, at time T3. Fletcher's response packet includes a time of transmission, T3, and a time of receipt at the client node T4, and does not include a measure of the processing time required to generate the response, as taught and claimed by the applicants.

In order to determine processing time using Fletcher's technique, the two data packets (request and response) must be correlated in step 1120; and the processing time computed by subtracting the time T2 that is included in the request data packet from the time T3 that is included in the transmit data packet. This measure of processing time is determined after the response data packet is received at the source node, and thus the response data packet from the target node cannot be said to contain this measure of processing time required to generate the response, as specifically claimed in each of the applicants' independent claims 1, 9, and 15. Accordingly, the applicants respectfully maintain that the rejection of claims 1-3, 5-11,

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13-17, and 19-21 under 35 U.S.C. 103(a) over the Ping Program, Wang, Fletcher, and Needham is unfounded, and should be withdrawn, the dependent claims being allowable for at least the same reasons as the independent claims.

Further, again assuming in argument that these prior art teachings were to be combined, the applicants respectfully note that the combination of the Ping Program, Wang, Fletcher, and Needham does not disclose determining the proximity of the target node based on a communication time that depends upon a difference between the measure of query-response time and the measure of processing time, as also specifically claimed in each of the applicants' independent claims 1 and 15.

The Office action asserts that the Ping Program teaches determining the proximity of the target node based on a communication time that depends upon a difference between the measure of query-response time and the measure of processing time at page 2, paragraph 4. This is incorrect.

The Ping Program does not address processing time, and cannot be said to teach determining proximity based on a query-response time and a processing time. Accordingly, the applicants respectfully maintain that the rejection of claims 1-3, 5-8, 15-17, and 19-21 under 35 U.S.C. 103(a) over the Ping Program, Wang, Fletcher, and Needham is unfounded, and should be withdrawn.

As noted above, the applicants respectfully maintain that one of skill in the art would have no apparent reason to combine the teachings of the Ping Program, Wang, Fletcher, and Needham in the particular fashion claimed by the applicants. The applicants further maintain that the Office action's suggested combination of four independent prior art references in an attempt to create a mosaic to match the applicants' claimed invention clearly cuts against a finding of obviousness.

In *KSR Int'l. Co. v. Teleflex, Inc.*, the Supreme Court noted that the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and that it is "important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed:

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"Often, it will be necessary ... to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an **apparent reason to combine the known elements in the fashion claimed by the patent at issue**. To facilitate review, this analysis should be made explicit." KSR, slip op. at 14 (emphasis added).

The applicants respectfully maintain that, absent the applicants' teachings in the present application, one of skill in the art would have no apparent reason to combine these particular references in the fashion claimed by the patent at issue. The invention at issue addresses an authentication scheme for verifying a node on a network. The Ping Program, Wang, and Fletcher address techniques for determining the performance of a network of nodes. Although each of these references addresses nodes on a network, the verification of a node for authentication purposes is substantially unrelated to techniques for evaluating the performance of a network.

The Office action asserts that it "would be obvious ... to combine Stevens [Pong Program] and Fletcher because returning the processing time allows the system to keep track of valuable metrics for further processing" (Office action, page 5, second full paragraph). The applicants respectfully note that this conclusory statement does not provide an apparent reason to combine the references in the manner claimed in each of the applicants' independent claims.

In the invention at issue, the applicants observe that the verification of a target node often requires a reliable technique for determining that the target node is local to the verifying node, and to efficiently determine the distance between the nodes, a protocol is established wherein the target node includes a processing time in its response to the verifying node, and the verifying node determines the proximity of the target node based on a difference between the measure of query-response time and the measure of processing time.

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The cited prior art techniques for assessing the performance of nodes on a network do not address determining a distance between nodes based on a difference between the measure of query-response time and the measure of processing time, because such a distance measure is immaterial to the task of assessing the performance of a network. The Office action's asserted reason for creating the proposed combination does not provide or lead to a reason for determining a measure of distance. The cited techniques compute query-response times and measures of processing time, and use these parameters to assess performance, but once these times are determined, there is no reason to subsequently determine a measure of the distance between the nodes based on these parameters.

Further, as noted above, Fletcher teaches a particular technique for providing information for determining processing time, and this technique does not include the inclusion of a measure of processing time in a response to a query. The Office action's asserted reason for forming the proposed combination also fails to provide or lead to a reason for ignoring Fletcher's technique for determining processing time and fails to provide or lead to a reason for including a measure of processing time in the response in view of Fletcher's teachings.

The applicants respectfully maintain that, absent the applicants' teachings in the present application, given the interrelated teachings of these references, the demands known to the design community, and common background knowledge, one of ordinary skill in the art would have no apparent reason to combine these elements in the fashion claimed by the applicants. Accordingly, the applicants respectfully maintain that the rejection of claims 1-3, 5-11, 13-17, and 19-21 under 35 U.S.C. 103(a) over the combination of the Ping Program, Wang, Fletcher, and Needham is unfounded, and should be withdrawn.

Additionally, as noted in MPEP 2141, citing KSR and Graham:

"As reiterated by the Supreme Court in *KSR*, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Obviousness is a question of law based on underlying factual inquiries. The factual inquiries enunciated by the Court are as follows:

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- (A) Ascertaining the differences between the claimed invention and the prior art;
and
(B) Ascertaining the differences between the claimed invention and the prior art;
and
(C) Resolving the level of ordinary skill in the pertinent art.

MPEP 2141 also states:

"When making an obviousness rejection, Office personnel must therefore ensure that the written record includes findings of fact concerning the state of the art and the teachings of the references applied. In certain circumstances, it may also be important to include explicit findings as to how a person of ordinary skill would have understood prior art teachings, or what a person of ordinary skill would have known or could have done."

"Any obviousness rejection should include, either explicitly or implicitly in view of the prior art applied, an indication of the level of ordinary skill."

In view of the fact that four prior art references are cited, the level of expertise of 'one of ordinary skill in the art' is not immediately or implicitly apparent. If the above arguments are not persuasive, and another Office action is issued, the applicants respectfully request that the Office action include an explicit determination of the level of ordinary skill in the art used for this rejection.

In view of the foregoing, the applicants respectfully request that the Examiner withdraw the objection(s) and/or rejection(s) of record, allow all the pending claims, and find the application in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

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Respectfully submitted,



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